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No. X.

SCREW-WRENCH.

The SILVER VULCAN MEDAL was this session presented to Mr. THOMAS EDDY, 354, Oxford-street, for a SCREW-WRENCH. The following communication has been received from the candidate; and a model of the wrench has been placed in the Society's repository.

SIR, 354, Oxford-street, March 17, 1824.

I BEG you will lay before the Society for the encouragement of Arts, Manufactures, and Commerce, a screw-wrench of my invention.

It is actuated by a screw as that is which is in common use, but differs from this latter in the screw being introduced into the sliding part instead of into the handle. By this arrangement the instrument is rendered much stronger, and is not liable to open and shut by the turn of the hand while using it, as is the case with the common one.

In manufactories where the work is heavy the common wrench is often breaking in the screw, an accident which cannot occur with the new one, as the strain is not on that part which contains the screw. It may be made at nearly the same expense as the one in common use.

I am, Sir,
&c. &c. &c.
THOS. EDDY.

A. Aikin, Esq.
Secretary, &c. &c.

Reference to the engraving of Mr. Eddy's Screw-wrench. Plate X.

FIG. 5 is a side view.

Fig. 7 is an edge view.

Fig. 6 is a longitudinal section.

(The same letters refer to the same parts in all the figures.)

a Is the fixed chap, *b* is the fixed bar, *c* is the movable chap which passes through and slides upon the bar *b*, *d* the movable bar fixed to the chap *c*. This bar has a hollow barrel, screwed at its orifice, in which the solid thumb-screw *f* works.

At the extremity of the bar *b* is formed a shoulder, on which rests the square piece *g*; or the bar may be turned up at right angles forming a short projecting leg, which will answer the purpose of the piece *g*, and will be both stronger and cheaper. A square hole is to be made in *g* to admit the screw *f*, and this hole is to be contracted in one part by the insertion of two square pins *i* and *h*, which confine the neck of the screw so as to allow it to turn round, but not to move backwards or forwards: *e* is a plate of iron wrapped round the end of the instrument in order to keep the parts in their proper places, and to prevent the screws from being choaked with dirt.

Hence it is obvious, that when the screw *f* is turned in one direction, the barrel *d*, with the chap *e*, is pushed towards the chap *a*, and that it is withdrawn when the screw is turned in the opposite direction.